

What is claimed is:

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1. An antimicrobial copolymer obtainable by copolymerizing (component I) aliphatically unsaturated monomers which have been functionalized by means of an ester group and at least singly functionalized by means of a tertiary amino group with (component II) another aliphatically unsaturated monomer which has been at least singly functionalized by means of an amino group, where component I and component II are different from one another.
2. The antimicrobial copolymer as claimed in claim 1, wherein component II is composed of aliphatically unsaturated monomers which have been at least singly functionalized by means of a tertiary amino group.
3. The antimicrobial copolymer as claimed in claim 1 or 2, wherein component I is composed of aliphatically unsaturated monomers whose ester group has been at least singly functionalized by means of an amino group.
4. The antimicrobial copolymer as claimed in one of claims 1 to 3, wherein component I is composed of acrylate or methacrylates which have been at least singly functionalized by means of a tertiary amino group.
5. The antimicrobial polymer as claimed in one of claims 1 to 4, wherein each of components I and II is an aliphatically unsaturated monomer functionalized by means of a tertiary amino group and having the general formula



where  $R^1$ : is a branched, unbranched or cyclic, saturated or

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unsaturated hydrocarbon radical having up to 50 carbon atoms which may have substitution by O atoms, N atoms or S atoms, and

$R^2$  and  $R^3$  are branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radicals having up to 25 carbon atoms, which may have substitution by O atoms, N atoms or S atoms, where  $R^2$  and  $R^3$  are identical or different,

with the proviso that  $R^1$  in monomers of component I contains an ester group.

6. The antimicrobial coating made from antimicrobial copolymers as claimed in one of claims 1 to 5, wherein the copolymerization is carried out on a substrate.

7. The antimicrobial coating made from antimicrobial copolymers as claimed in one of claims 1 to 5, wherein the copolymerization is carried out as a graft polymerization of a substrate.

8. The antimicrobial coating as claimed in claim 7, wherein the substrate is activated prior to the graft polymerization by UV radiation, plasma treatment, corona treatment, flame treatment, ozonization, electrical discharge or  $\gamma$ -radiation.

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9. The antimicrobial coating as claimed in claim 7, wherein the substrate is activated prior to the graft polymerization by UV radiation with a photoinitiator.

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10. A process for preparing antimicrobial copolymers by copolymerizing (component I) aliphatically unsaturated monomers which have been functionalized by means

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of an ester group and a tertiary amino group with (component II) another aliphatically unsaturated monomer which has been at least singly functionalized by means of an amino group, where components I and II are different from one another.

11. The process as claimed in claim 10, wherein component II is composed of aliphatically unsaturated monomers which have been at least singly functionalized by means of a tertiary amino group.

12. The process as claimed in claim 10 or 11, wherein component I is composed of aliphatically unsaturated monomers whose ester group has been at least singly functionalized by means of an amino group.

13. The process as claimed in one of claims 10 to 12, wherein component I is composed of acrylate or methacrylates which have been at least singly functionalized by means of a tertiary amino group.

14. The process as claimed in one of claims 10 to 13, wherein each of components I and II is an aliphatically unsaturated monomer functionalized by means of a tertiary amino group and having the general formula



where  $R^1$ : is a branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radical having up to 50 carbon atoms which may have substitution by O atoms, N atoms or S atoms, and  
 $R^2$  and  $R^3$ : are branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radicals having up to 25 carbon atoms, which

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may have substitution by O atoms, N atoms or S atoms, where  
 $R^2$  and  $R^3$  are identical or different,  
with the proviso that  $R^1$  in monomers of component I contains an ester group.

5 15. The process as claimed in one of claims 10 to 14,  
wherein  
the copolymerization is carried out on a substrate.

10 16. The process as claimed in one of claims 10 to 15,  
wherein  
the copolymerization is carried out as a graft polymerization of a substrate.

15 17. The process as claimed in claim 16,  
wherein  
the substrate is activated prior to the graft polymerization by UV radiation, plasma  
treatment, Corona treatment, flame treatment, ozonization, electrical discharge  
or  $\gamma$ -radiation.

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20 18. The process as claimed in claim 17,  
wherein  
the substrate is activated prior to the graft polymerization by UV radiation with a  
photoinitiator.

25 19. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 for  
producing products with an antimicrobial coating comprising the copolymer.

20. The use of the antimicrobial polymers as claimed in one of claims 1 to 9 for  
producing items in medical technology with an antimicrobial coating comprising  
the copolymer.

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21. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 for  
producing hygiene items with an antimicrobial coating comprising the copolymer.

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22. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 in surface coatings, protective paints or in other coatings.

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